Anti-metabolites : They are at the same time anti-cancer drugs, either inhibit purine synthesis or pause the metabolism (So inhibit DNA elongation)

We have 3 drugs :

 1) Methotrexate : mostly anti cancer, inhibit dihydrofolate reductase.

 2) Azathioprine and mercaptopurine : mainly pause metabism .

 3) Mycopbenolate : popular drug in treatment of transplantation, reversible inhibitor for inosine monophosphate dehydrogenase (IMPDH) enzyme , the enzyme which important for synthesis of guanosine

Nucleotides, so guanosine will be depleted, this depletion has anti proliferative effects on lymphocyte (B and T), so it is not selective drug, here we inhibit the cellular and humoral immunity.

 .

So if we will transplant any organ, We have to give the following immunosuppression Drugs :

1) glucocorticosteroid ... main player.

2) tacrolimus (up to lid, explained later) or cyclosporine or sirolimus.

 3) anti metabites, depending on the pt situation either azathioprine or mycophenelate ( which is preferred in pt showing acute rejection).

More deatails and explanation in the next sheet.

GOOD LUCK ;D